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Congenital Heart Disease

INCIDENCE AND PREDICTORS OF STROKE IN ADULTS WITH CONGENITAL HEART DISEASE: THE IMPACT OF HEART FAILURE

Oral Contributions
Room 146 A
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Session Title: Adult Congenital Heart Disease
Abstract Category: 9. Congenital Heart Disease: Adult
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Background: Stroke is an important cause of morbidity in the general population. There is a lack of data for adults with congenital heart disease (ACHD).

Methods: This was a retrospective cohort study of 28,465 ACHD Quebec patients aged 18 to 64 years between 1998 and 2010 based on aggregated province-wide administrative data.

Results: The cumulative risk of stroke estimated over the course of adulthood was 9.9% (95%-CI: 8.5-11.2%) in men and 7.7% (95%-CI: 6.6-8.8%) in women. Standardized rates compared to the general population of Quebec ranged from 174-383 per 100,000 person-years (py) for age-groups 20-64 compared to 15-111 per 100,000 py for the same age strata. Heart failure (OR 4.73 (95%-CI: 2.73-8.17) for age-group 18-44; OR 1.64 (95%-CI: 1.25-2.03) for age-group 45-64) emerged as the strongest predictors for stroke from a combination of stepwise model selection and Bayesian model averaging. In a propensity score matched sub cohort (Figure) the absolute risk of stroke over a ten-year follow-up was 6.8% (95%-CI 4.4-10.3%) for patients with a first diagnosis of heart failure compared to 3.1% (95%-CI: 2.0-4.9%) in non-heart failure patients (stratified log-rank test: p=0.0045).

Conclusion: One in ten men and one in thirteen women with ACHD suffered a stroke from ages 18-64. This was 12 times more common than non-ACHD adults in the general population less than 55 years of age. Heart failure was the strongest predictor of stroke in ACHD patients.